

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 03-023299

(43)Date of publication of application : 31.01.1991

(51)Int.Cl. C30B 29/40  
C30B 25/02  
H01L 21/205

(21)Application number : 01-155874 (71)Applicant : FUJITSU LTD

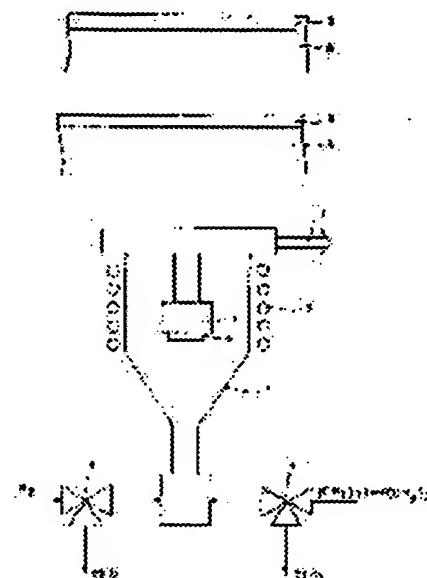
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## (54) GROWTH METHOD FOR COMPOUND SEMICONDUCTOR CRYSTAL

### (57)Abstract:

**PURPOSE:** To apply atomic-layer epitaxy with a self-limiting characteristic by forming one layer of the adduct of the alkyl compds. of the group III element and group V element constituting the semiconductor on a semiconductor substrate and then bringing the surface of the adduct layer with a reducing gas at a higher temp.

**CONSTITUTION:** One semiconductor layer 4 (substrate) arranged in a crystal growth device (reaction tube 1) is brought into contact with the adduct 8 of the alkyl compds. of the group III element and group V element constituting the one semiconductor to deposit one layer of the adduct 8 on the layer 4. The layer 4 deposited with the adduct 8 layer is brought into contact with a reducing gas (e.g. H<sub>2</sub>) at a temp. higher than the contact temp. of the adduct 8 to grow a single crystal layer 9 of the compd. semiconductor of the group III element and group V element. (CH<sub>3</sub>)<sub>3</sub>In.P(CH<sub>3</sub>)<sub>3</sub> is exemplified as the organometallic adduct compd.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]